

**COMMONWEALTH OF VIRGINIA**  
**Department of Environmental Quality**  
**Valley Regional Office**

**STATEMENT OF LEGAL AND FACTUAL BASIS**  
**Significant Permit Modification**

R. R. Donnelley & Sons Company  
Harrisonburg, Virginia  
Permit No. VRO81000  
Effective Date: September 28, 2011  
Expiration Date: September 27, 2016

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, R. R. Donnelley & Sons Company has applied for a significant modification of its Title V Operating Permit for its Harrisonburg book printing facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact:

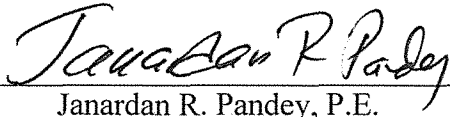


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Date:

9/9/15

## **REQUESTED MODIFICATION**

On November 18, 2014, the Valley Regional Office received a request from R.R. Donnelley & Sons dated November 17, 2014, for a significant permit modification to the R.R. Donnelley & Sons Title V operating permit, with additional information received on July 6, 2015. The significant permit modification requests the incorporation of the conditions from the existing New Source Review (NSR) permit, issued on January 5, 2012, as amended on August 5, 2014 and March 26, 2015, to modify and operate the commercial trade book printing facility in Harrisonburg, Virginia.

## **REASON FOR MODIFICATION**

R.R. Donnelley & Sons has requested a significant modification to the current Title V operating permit, with an effective date of September 28, 2011 and an expiration date of September 27, 2016. This modification will incorporate the following changes into the TV permit, per minor NSR permit modifications:

- (i) Increase the VOC emission limits for the three Proteus ink-jet digital printing presses (105, 106, and 107);
- (ii) Combine the VOC throughput and emission limits on all five Proteus printing Presses 105 – 109, which includes the three Proteus presses (105 – 107) that were permitted and installed in 2010, and the two Proteus presses (108 – 109) that were permitted and installed in 2012;
- (iii) Rename the equipment reference number from Press 767 to Press 786 following modification of the Press 767 which replaced two 9” units with two 8” units; and
- (iv) Remove Presses 768 and 769 from the permit. These presses have been removed from the facility.

Although 40 CFR 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters*, does apply to the two 6.7 MMBtu/hr hot water boilers, and the three 2.2 MMBtu/hr steam boilers, this issue shall be addressed in this facility’s Title V permit renewal, and not in this significant modification.

## **APPLICABILITY OF 9 VAC 5-80-230**

According to 9 VAC 5-80-230, significant modification procedures must be used for those permit modifications that do not qualify as minor permit modifications under 9 VAC 5-80-210 or as administrative amendments under 9 VAC 5-80-200. The modification proposal to the R.R. Donnelley & Sons Title V operating permit does not meet the specifications for an administrative amendment or a minor permit modification. The Regulations further list criteria, any of which, if met, require use of significant modification procedures. The changes proposed by R.R. Donnelley & Sons meet the following criterion, as stated in 9 VAC 5-80-230.A.1:

*Significant modification procedures shall be used for those permit modifications that involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit.*

The R.R. Donnelley & Sons Title V permit modification requires the establishment of emission limitations, standards, and monitoring through the incorporation of the new applicable requirements in the NSR permit dated January 5, 2012, as amended August 5, 2014, and March 26, 2015. Since the changes proposed by R.R. Donnelley & Sons meet at least one criterion listed in 9 VAC 5-80-230 and do not qualify as an administrative amendment or minor permit modification, the changes must be processed as a significant permit modification.

### **CHANGES TO TITLE V OPERATING PERMIT**

The changes made to the Title V permit are described below, and include the requirements from the NSR permit. The Condition numbers refer to the draft Title V permit. Alphanumeric numbers refer to Conditions, proposed for modification, as numbered within the current Title V permit. Numeric numbering refers to new Conditions proposed for the Title V permit, using the agency's new Title V permit numbering system.

**FACILITY INFORMATION:** No change.

**FACILITY DESCRIPTION:** Added a description of the facility, which previously consisted of only the NAICS.

NAICS Codes: 323117 (former SIC Code: 2732) – Book printing

**EMISSION UNITS:** The Emission Units table was updated to specify changes in the emission units and in the applicable permits for the facility, as follows:

- Presses 108 and 109 have been added.
- Press 767 has been modified and renumbered as Press 786.
- The permit dates have been updated.

**SHEETFED OFFSET PRINTING PRESS (UNIT 751) – No change.**

**WEB OFFSET PRINTING PRESS (UNITS 765 – 773, 782 - 785, 787, 790, AND 791) –**

General (Section-wide):

- Press 767: has been modified (changed from two - 9 inch ink units to two - 8 inch ink units), and renumbered as Press 786. Therefore, all references to Press 767 have also been removed. The Web Offset Printing Press now refers to Presses 765 – 766, 770-773,

782-787, 790, and 791. This change affects Conditions 11, 13, 15, 16, 17, and 22; none of which are addressed separately because the change is limited to Press renumbering. The changes in 25, 30a, 30d, and 34 are detailed under Limitations or Monitoring and Recordkeeping, below.

- Presses 768 – 769: All references to Presses 768 – 769 are removed from the permit, as these presses have been shutdown and removed from the facility. Any Condition that references these presses regarding something that is generic to all presses in this group will not be annotated below. However, if a Condition is specific to Presses 768 and 769, it will be discussed as pertaining to that specific Condition.

Limitations: all NSR Condition numbers listed are from the NSR dated January 5, 2012 as amended August 5, 2014, and March 26, 2015.

TV Condition 18 (TV Condition IV.A.6, NSR Condition 8) - Condition clarified by adding “VOC emissions from” regarding emissions from Presses 770 and 772.

TV Condition 21 (TV Condition IV.A.11, NSR Condition 23):

- Remove Press 767, and 4.8 tpy VOC emission limit. Press has been modified and renamed as Press 786.
- Add a VOC emission limit for Press 786 (formerly Press 767) of 5.7 tons per year (State BACT).
- Remove annual VOC emission limits for Presses 768 and 769. Presses have been shut down.

Monitoring and Recordkeeping:

- TV Condition 24 (TV Condition IV.B.1, no associated NSR Condition) – The referenced stack numbers change as a result of the change in Press reference numbers, to include deleted and renumbered Presses.
- TV Condition 25 (TV Condition IV.B.2, no associated NSR Condition) – The Condition is modified to indicate that Press 786 (formerly Press 767) is to have compliance with its annual emission limit, 5.7 tpy as listed in Condition 21 (NSR Condition 23 (State BACT)), determined individually, and not as part of a group of presses.
- TV Condition 30d. (TV Condition IV.B.7.d, NSR Condition 30) – Press 786 shall have its monthly and annual emissions determined individually. Compliance with the annual emission limit of 5.7 tpy is established by calculating the VOC emissions monthly utilizing the formula in Condition 25 (No associated NSR Condition). The VOC emissions for the most recently completed calendar month are added to the individual

monthly totals for the preceding 11 months to demonstrate annual compliance, as stated in Condition 21(NSR Condition 23 (State BACT)).

- TV Condition 30k. (TV Condition IV.B.7.k, no associated NSR Condition) – Stack numbers changed to correspond with the change in associated stacks, due to the shutdown of Press 767, and it's renumbering as Press 786.

### **INK-JET DIGITAL PRINTING PRESSES (UNITS 105 - 109)**

General (Section-wide): The Proteus presses (Units 105 – 109), both with and without a coating unit, will have their model name listed, per specific statements to such in the NSR permit.

#### Limitations:

- TV Condition 40 (TV Condition V.A.3, NSR Condition 21) – VOC throughput changed from 6.1 tpy for each Press 105, 106, and 107 to one combined throughput for all three presses, to 38.2 tpy.
- TV Condition 41 (TV Condition V.A.5, NSR Condition 24) – VOC emissions changed from 1.4 lb/hr and 6.1 tpy for each Press 105, 106, and 107 to one combined emission limit, for all three presses, to 8.72 lb/hr and 38.2 tpy.
- TV Condition 42 (NSR Condition 6) – Add a limit on VOC emissions from the two presses without a coating unit (Presses 108 and 109) to be controlled by the use of inks having VOC content of not more than 0.866 lb/gal, by weight.
- TV Condition 43 (NSR Condition 22) – Add a VOC throughput in the two presses without a coating unit (Presses 108 and 109) to not exceed 30.7 tons per year, calculated monthly as the sum of each consecutive 12-month period.
- TV Condition 44 (NSR Condition 25) – Add VOC emission limits from the two presses without a coating unit (Presses 108 and 109) of 7.02 lbs/hr and 30.7 tpy.
- TV Condition 46 (NSR Condition 27) – Add a limit on visible emissions (opacity) of 10% for the two presses without a coating unit (Presses 108 and 109).

#### Monitoring and Recordkeeping:

- TV Condition 47 (No corresponding NSR Condition) – For the purpose of calculating emissions, maximum VOC content from MSDS is used if VOC content is listed as a range of values.
- TV Condition 48 (NSR Condition 30) –

- TV Condition 48c (NSR Condition 30d) - Compliance with annual throughput on the two Proteus presses without a coating unit (Presses 108 and 109) shall be demonstrated by keeping monthly and annual records on the combined throughput from both presses. Per Condition 43 (NSR Condition 22 (State BACT)), recordkeeping shall show a monthly calculation as the sum of the consecutive 12-month period.
- Condition 48h (NSR Condition 30h) - Compliance with the hourly emission limit in Condition 41 (NSR Condition 24 (State BACT)) on the two Proteus presses without a coating unit (Presses 108 and 109) shall be demonstrated by calculating a monthly average on the hourly emissions, as noted in Condition 44 (NSR Condition 25 (State BACT)). VOC emissions from the Presses 108 and 109 are also limited to the use of inks having a VOC content of not more than 0.866 lb/gal, as noted in Condition 42 (NSR Condition 6 (State BACT)).

Annual emissions from the two Presses without a coating unit (108 and 109) are limited to 30.7 tpy as noted in Condition 44 (NSR Condition 25 (State BACT)). This value is the same as the annual throughput limit listed in Condition 43 (NSR Condition 22 (State BACT)); thus, no VOCs are expected to be consumed in the process. Compliance for the annual emission limit is demonstrated monthly by adding the total for the most recently-completed calendar month to the individual monthly totals for the preceding 11 months.

Notification:

- Remove Condition V.D (Notification). This Condition had required written notification for the construction date and the actual start-up date of the three presses with a coating unit (105, 106, and 107). This Condition has been fulfilled.

**PAPER AND DUST HANDLING SYSTEMS: UNITS - PNEUMATIC TRIM SCRAP (PTS-1 AND PTS-2) SYSTEMS AND WASTE PAPER DUST (WPD) COLLECTION SYSTEM.**

This section has not been modified.

Limitations:

- TV Condition 55 (TV Condition VI.A.4, NSR Condition 26) - The hourly PM emission limits for the PTS-1, PTS-2, and WPD shall each be calculated monthly as a monthly average. Annual emission limits for each of the listed units shall be calculated monthly as the sum of the previous consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

- TV Condition 55 (TV Condition VI.A.4, NSR Condition 26):
  - PM emissions for the WPD are controlled by the fabric filter listed in Condition 52 (NSR Condition 10 (State BACT)).
  - PM emissions for the PTS-1 are controlled via the paper throughput limit of 38,600 tpy listed in Condition 53 (NSR Condition 19). Compliance with the hourly emission limit established in Condition 55 (NSR Condition 26 (State BACT)) is determined using the formula in Condition 58 (no associated NSR Condition). Compliance with the annual emission limit established in Condition 55 (NSR Condition 26) shall be determined via the formula listed in Condition 59 (no associated NSR Condition).
  - PM emissions for the PTS-2 are controlled via the paper throughput limit of 87,600 tpy established in Condition 54 (NSR Condition 20 (State BACT)). Compliance with the annual emission limit established in Condition 55 (NSR Condition 26 (State BACT)) shall be determined via the formula listed in Condition 60 (no associated NSR Condition).

**ADHESIVE OPERATIONS - EMISSION UNIT ADH - No change.**

**FACILITY-WIDE CONDITIONS - EMISSION UNITS EG-1 AND EG-2 – No change.**

#### **INSIGNIFICANT EMISSION UNITS**

<b>Current Unit Ref.</b>	<b>Emission Unit Description</b>	<b>Changes</b>
ADH	Water-based adhesive tanks	Rename emission Unit No. to “ADH-TKS”

#### **INAPPLICABLE PERMIT REQUIREMENTS**

Compliance Assurance Monitoring is not applicable to the affected units in this modification. The compliance assurance monitoring plan for this facility is relegated to the Waste Paper Dust (WPD) Collection System, which has not been modified.

The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require owners and operators of general stationary fuel combustion sources that emit 25,000 metric tons CO<sub>2</sub>e or more per year in combined emissions from such units, to report greenhouse gas (GHG) emissions, annually. The definition of “applicable requirement” in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

As a result of several EPA actions regarding GHG under the CAA, emissions of GHG must be addressed for Title V permit actions after January 1, 2011. The current NSR permit for this facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

**GENERAL CONDITIONS** – Condition XI.U. (Malfunction as an Affirmative Defense) – Has been reformatted from one Condition to two separate Conditions, 121 and 122.

## **PUBLIC PARTICIPATION**

The public participation requirements of 9 VAC 5-80-270 apply to significant permit modifications. A public notice regarding the draft permit was placed in the *Daily News Record*, on July 24, 2015. The EPA was sent a copy of the draft permit and notified of the public notice on July 22, 2015. West Virginia, the only affected state, was sent a copy of the public notice in a letter dated July 23, 2015. All persons on the Title V mailing list were also sent a copy of the public notice via either letter or email dated July 23, 2015.

Public comments were accepted from July 24, 2015 to August 24, 2015. The EPA comment period ended on September 6, 2015. No public comments were received. One comment was received from the EPA. The comment was responded to. No further comments were received from the EPA.

## **ATTACHMENTS**

Attachment A – Minor NSR Permit dated January 5, 2012 as amended August 5, 2014, and March 26, 2015

Attachment B – Engineering Memorandum for Minor NSR Permit dated January 5, 2012 as amended August 5, 2014, and March 26, 2015